

Claims

[c1] What is claimed is:

1. An optical proximity correction (OPC) method for correcting a photomask layout, wherein the photomask layout comprises at least a photomask pattern, the OPC method comprising:

collecting an assist feature bias of a predetermined first assist feature which will be added to the photomask layout;

performing a rule-based OPC process by taking account of the assist feature bias to compute a target bias of the photomask layout and output a corrected photomask layout according to the target bias; and

adding the first assist feature to the corrected photomask layout.

[c2] 2. The OPC method of claim 1, wherein the first assist feature is a scattering bar.

[c3] 3. The OPC method of claim 1, further comprising using the collected assist feature bias to build an assist feature correction model for the rule-based OPC process.

[c4] 4. The OPC method of claim 1, further comprising trans-

ferring the collected assist feature bias to a specific format for the ruled-based OPC process.

[c5] 5.The OPC method of claim 1, wherein the rule-based OPC process is used for correcting an edge portion of the photomask pattern.

[c6] 6.The OPC method of claim 1, wherein the rule-based OPC process comprises:
collecting a width and a spacing of the photomask pattern to obtain a parameter of the photomask pattern;
and
adding a second assist feature using a correction rule of a database according to the parameter of the photomask pattern.

[c7] 7.The OPC method of claim 6, wherein the second assist feature is a serif or a hammerhead pattern.